

**Abstract of the Disclosure****METHOD FOR ELIMINATING OR REDUCING HANG CONDITIONS IN  
COMPUTER SYSTEMS**

5           An improved data structure handles locks and other mutual exclusion (mutex)  
mechanisms during a "panic" shutdown of the system such as when the system "hangs".  
Existing mutex data structures include an identifier of the engine/processor, the thread, or the  
processes acquiring the mutex. The improved mutex data structure further includes an indicator  
10 of whether the mutex was acquired before or after the panic (pre-panic or post-panic), preferably  
as a modification of the engineID after the panic is initiated such as by assigning the engines  
different engineIDs post-panic. The method checks mutexes to determine whether they were  
acquired pre- or post-panic mutexes. During a panic, alternative mutex handling routines free  
(release) pre-panic mutexes and shoot down the processors owning these mutexes. The data  
15 structure and method are generally useful in state transitions of the system, its  
engines/processors, and its processes and threads. An article of manufacture embodies the  
method and data structure in software.